DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 99.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-002793
Date Inspected: 23-May-2008

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Japan Steel Works, Ltd.

OSM Arrival Time: 2230
OSM Departure Time: 830
Location: Muroran, Japan

CWI Name: Motoi-Hidaka

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: Tower, Jacking and Deviation Saddles

Summary of Items Observed:

On this date OSM Quality Assurance (QA) Representative Daniel L. Reyes observed the following activities relative to this project. The following was observed:

At the start of the shift, the QA inspector traveled to the Foundry Shop to observe the continued repair welding of the rib build-up areas on the West Deviation Saddle Casting identified as W2E1. The repair welding is being conducted at Lane 3 of the Foundry Shop at the designated area identified as “The Welding Area.” The QA inspector observed the welding performed by Japan Steel Welding, Ltd. (JSW) welding personnel Noritake-Tamura ID 93-2337 on the repair area of rib 1L identified as 3-10 which was completed during this shift. The QA inspector also observed a second welder, Kazuya-Komai ID 06-8002 performing the repair welding on rib 8L identified as repair area 2-2. The weld inspection was performed by the QC inspector Motoi-Hidaka and the welding was performed utilizing the Shielded Metal Arc Welding (SMAW) process as per the Welding Procedure Specification (WPS) identified as SJ-3026-2 which was also used by the QC inspector as a reference during QC verification.

The consumable utilized by the welders appeared to be a Hobart Brothers Product identified as LB-106, with the diameter size of 5.0 mm which appeared to comply with the AWS Specification A5.5 and classification E10018-G. The welders performed the repair welding in the horizontal (2G) position with the work in the vertical plane and the axis of the weld horizontal.

At the conclusion of verifying the preheat temperature of 190 degrees Celsius at the weld repair area 2-2, which the repair welding was performed by the JSW welding personnel Mr. Kazuya, the QC inspector verified the Alternate Current (AC) welding parameters and was observed as follows, 200 AC amps and 23.4 AC volts with a travel speed measured at 171.4 mm/m. Shortly thereafter, and after concluding the verification of the preheat

temperature of 200 degrees Celsius at the weld repair area 3-10, the QC inspector verified the AC welding parameters during the welding performed by JSW welding personnel Mr. Noritake and was observed as follows, 202 AC amps and 24 AC volts with a travel speed measured at 133.3 mm/m.
Later in the shift, the QA inspector observed the welder, Noritake-Tamura performing the welding at rib 7L identified as repair area 2-6. The QA inspector verified the welding parameters which were observed as follows, 208 AC amps and 23.0 AC volts with a travel measured at 137.1 mm/m.
The QA inspector observed that the QC inspector was not in the vicinity of the weld station at this time.

Later during this shift the QA inspector, at random intervals, observed the QC inspectors perform QC verification of the welding parameters, minimum and maximum surface temperatures and performing the visual weld inspection.

QA Observation Summary
This QA inspector randomly observed the in process Shielded Metal Arc Welding (SMAW) for the repair welding of the ribs on the West Deviation Saddles identified as W2E1. This QA inspector noted that it appeared the approved and latest revised WPS's were posted at the appropriate welding station and that each approved welder was entered in the latest revised Welding Personnel Log issued by Japan Steel Works, Ltd. The welding parameters, preheat and interpass temperatures were verified as noted by this QA inspector utilizing a Fluke 337 clamp meter for the electrical welding parameters and Tempilstik temperature indicators for preheat and interpass temperatures. The filler metal utilized at the welding stations was also verified and the calibration dates of the measuring instruments utilized by the QC inspectors, the clamp amp/volt meter and the digital surface thermometer, were previously verified by this QA inspector. The QC inspector Motoi-Hidaka appeared to perform the visual examinations and monitoring of the welding as per the contract documents. The welding and inspection was not completed during this shift and appeared to be in general compliance with the contract documents.

See Weld Joints in Progress Inspected on page three (3) of this report in regards to QA observation of the welding parameters recorded during this shift on this date.

The digital photographs on page three (3) of this report illustrates the observations of the activities performed on this date.

WELDING INSPECTION REPORT

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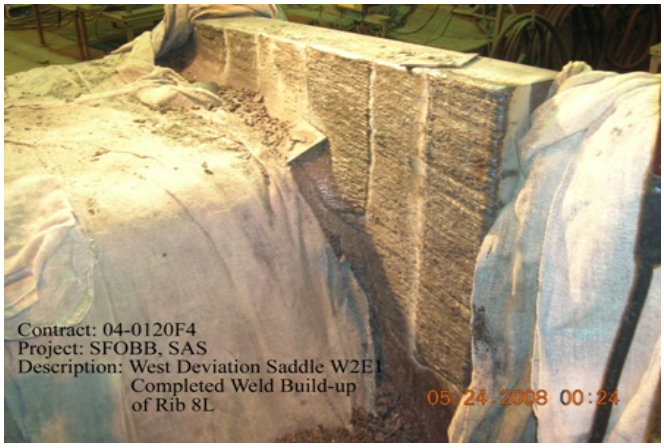

Item	Weld Identification	Applicable WPS	CWI Name	Amperage	Voltage	TravelSpeed	Preheat Temp	Remarks
1	W2E1, Rib 1L/3-10	SJ-3026-2	Motoi-Hidaka	203 AC	23.7 AC	169.0 mm/m	180 Degrees C.	Kazuya-Komai
2	W2E1, Rib 8L/2-2	SJ-3026-2	Motoi-Hidaka	200 AC	23.8 AC	135.0 mm/m	200 Degrees C.	Noritake-Tamura

Summary of Conversations:

There were no pertinent conversations relative to this project on this date.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Venkatesh Iyer, (858) 967-6363, who represents the Office of Structural Materials for your project.

Inspected By:	Reyes,Danny	Quality Assurance Inspector
Reviewed By:	Lanz,Joe	QA Reviewer